

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A lead assembly comprising:
 - a lead body extending from a distal end to a proximal end;
 - a conductor disposed within the lead body;
 - a piston movably disposed within the lead body;
 - a fixation helix supported by the piston at a first portion of the fixation helix, the first portion of the fixation helix supported by the piston and having one or more helical drive grooves forming a drive mechanism ~~including one or more helical drive grooves~~, the helical drive grooves positioned on an outer surface of the piston in which successive turns of the fixation helix are partially recessed within the piston with a portion of the fixation helix above an outer surface of the piston; and
 - a housing portion positioned near the distal end of the lead body, the housing portion including a guide disposed on an inner surface thereof in which the first portion of the fixation helix rides along during at least one of advancing or retracting of the fixation helix relative to the lead body.
2. (Original) The lead assembly as recited in claim 1, wherein the first portion of the fixation helix is coupled with the piston.
3. (Previously Presented) The lead assembly as recited in claim 1, wherein the piston has the recess wrapped around, and extending inwardly from, the outer surface thereof such that one or more portions of the recess are separated from one another by a non-recessed portion, and at least a portion of the first portion of the fixation helix is disposed within the recess.
4. (Previously Presented) The lead assembly as recited in claim 1, wherein the recess has a helical shape.

5. (Previously Presented) The lead assembly as recited in claim 1, wherein the recess has a first width and the first width is less than a wire diameter of the first portion of the fixation helix.

6. (Previously Presented) The lead assembly as recited in claim 3, wherein approximately 1/3 to 1/2 of a wire diameter of the fixation helix is disposed within the recess.

7. (Canceled)

8. (Currently Amended) A lead assembly comprising:
a lead body extending from a distal end to a proximal end;
a housing positioned near the distal end of the lead body, the housing including a guide disposed on an inner surface thereof;
a conductor disposed within the lead body;
a piston movably disposed within the housing; and
a fixation helix coupled with, and protruding radially around, the piston along a first longitudinal portion of the fixation helix, the first portion of the fixation helix coupled with the piston forming helical drive grooves positioned on an outer surface of the piston in which successive turns of the fixation helix are partially recessed within the piston with a portion of the fixation helix above an outer surface of the piston;

wherein the fixation helix ~~and piston form~~ forms a drive mechanism that rides along the guide allowing at least one of advancing or retracting of the fixation helix relative to the lead body.

9. (Previously Presented) The lead assembly as recited in claim 8, wherein the guide is a helical guide protruding from the inner surface of the housing.

10. (Previously Presented) The lead assembly as recited in claim 9, wherein the helical guide is a segmented helical guide.

11. (Previously Presented) The lead assembly as recited in claim 8, wherein the fixation helix is coupled with the piston along the recess extending inward from an outer surface of the piston, a first portion of the recess separated from a second portion of the recess by a non-recessed piston portion.

12. (Canceled)

13. (Original) The lead assembly as recited in claim 8, wherein the fixation helix is coupled with the piston along a helical recess within the piston.

14. (Original) The lead assembly as recited in claim 8, wherein the fixation helix is electrically coupled with the conductor.

15. (Currently Amended) A lead assembly comprising:

a conductor;

a piston electrically coupled with the conductor;

an active fixation helix supported by the piston at a first portion of the fixation helix, the first portion of the fixation helix supported by the piston and having one or more helical drive grooves forming a drive mechanism that longitudinally advances and retracts the fixation helix, ~~the drive mechanism including one or more helical drive grooves~~, the helical drive grooves positioned on an outer surface of the piston in which successive turns of the fixation helix are partially recessed within the piston with a portion of the fixation helix above an outer surface of the piston; and

a housing including a guide therein, the guide extending from an inner surface of the housing and adapted to interact directly with the first portion of the fixation helix.

16. (Original) The lead assembly as recited in claim 15, wherein the active fixation helix is electrically coupled with the piston.

17. (Previously Presented) The lead assembly as recited in claim 15, wherein the active fixation helix is recessed within an outer axial surface portion of the piston.

18. (Previously Presented) The lead assembly as recited in claim 15, further comprising one or more recessed groove portions separated by non-recessed groove portions, wherein the active fixation helix is mechanically coupled with the piston via the one or more recessed groove portions.

19. (Currently Amended) A method comprising:
providing a lead assembly including:
a lead body extending from a distal end to a proximal end;
a conductor disposed within the lead body;
a piston movably disposed within the lead body;
a fixation helix supported by, and protruding radially around, the piston at a first portion of the fixation helix, the first portion of the fixation helix having one or more helical drive grooves forming a drive mechanism ~~including one or more helical drive grooves~~, the helical drive grooves positioned on an outer surface of the piston in which successive turns of the fixation helix are partially recessed within the piston with a portion of the fixation helix above an outer surface of the piston;
a housing including a guide extending from an inner surface thereof;
rotating the fixation helix; and
longitudinally driving the fixation helix with the drive mechanism, including moving the first portion of the fixation helix directly along the guide.

20. (Previously Presented) The method as recited in claim 19, further comprising recessing at least a part of the first portion of the fixation helix within the piston such that a non-recessed portion of the piston separates successive turns of the fixation helix.

21. (Previously Presented) The method as recited in claim 19, further comprising recessing approximately $1/3$ to $1/2$ of a wire diameter of the fixation helix within the piston such that successive turns of the fixation helix are separated by a non-recessed piston portion.
22. (Original) The method as recited in claim 19, further comprising recessing at least a part of the first portion of the fixation helix within a helical groove of the piston.
23. (Original) The method as recited in claim 19, further comprising coupling the first portion of the fixation helix with the piston.
24. (Previously Presented) The lead assembly as recited in claim 1, wherein the housing portion comprises a molded component.
25. (Previously Presented) The lead assembly as recited in claim 8, further comprising a stop adapted to prevent over extension of the fixation helix from the lead body, the stop protruding around a portion of the piston.
26. (Previously Presented) The lead assembly as recited in claim 15, further comprising a fluoromarker coupled with a portion of the housing.